

- Lee, Jaymin (1997) 'The maturation and growth of infant industries: the case of Korea', *World Development*, 25(6), pp. 1271–81.
- (1999) 'East Asian NIEs model of development: Miracle, crisis, and beyond', *The Pacific Review*, 12(2) pp. 141–62.
- Maddison, A. (1991) *Dynamic Forces in Capitalist Development: A Long-run Comparative View*, New York: Oxford University Press.
- Minami, R. (1981) *Economic Development of Japan*, Tokyo: Toyokeizaishinboshu (in Japanese).
- Munting, R. (1996) 'Industrial revolution in Russia', in M. Teich and R. Porter (eds) *The Industrial Revolution in National Context*, Cambridge: Cambridge University Press, pp. 329–49.
- Ohkawa, K. and Rosovsky, H. (1973) *Japanese Economic Growth*, Stanford: Stanford University Press.
- Rosovsky, H. (1961) *Capital Formation in Japan 1868–1940*, New York.
- (1972) 'What are the lessons of Japanese economic history?', in A.J. Youngson (ed.) *Economic Development in the Long Run*, London: George Allen and Unwin, pp. 229–54.
- Shin, Jangsup (1996) *The Economics of the Latecomers: Catching-up, technology transfer and institutions in Germany, Japan and South Korea*, London: Routledge.
- Sylla, R. and Toniolo, G. (1991) 'Introduction: Patterns of European industrialization during the nineteenth century', in Sylla, R. and Toniolo, G. (eds) *Patterns of European Industrialization: the Nineteenth Century*, London: Routledge, pp. 1–26.
- Tilly, R. (1991) 'Germany', in Sylla, R. and Toniolo, G. (eds) *Patterns of European Industrialization: the Nineteenth Century*, London: Routledge, pp. 175–96.
- Trebilcock, C. (1981) *The Industrialization of the Continental Powers, 1780–1914*, London: Longman.
- Wade, R. (1990) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*, Princeton: Princeton University Press.
- Weiss, L. and Hobson, J. (1995) *States and Economic Development: A Comparative Historical Analysis*, Cambridge: Polity Press.
- Westphal, L.E. and Kim, Kwang Suk (1976) *Korea's Foreign Exchange and Trade Policy*, Seoul: Korea Development Institute (in Korean).
- World Bank (1993) *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press.

6 Export dynamics in Taiwan and Mainland China 1950–2000

A Schumpeterian approach

*Hans H. Bass**

This paper deals with the export performance of two of Asia's most dynamic economies, Taiwan and Mainland China. The paper uses a theoretical approach derived from J.A. Schumpeter, one of the founding fathers of dynamics as a concept in economic theory and economic history. To compare the economic history of Taiwan and Mainland China may be considered strange for various reasons – for example the differences in size, the present state of development, and the shape of their economic systems. However, the two economies can well be compared by focusing on their success in global markets. These days they increasingly interact and contribute to the 'Greater China' growth pole in the world economy. This paper will analyse the export performance of both Taiwan and Mainland China during the past 50 years. Then it will investigate the interaction between Taiwan and Mainland China in the 1990s with regard to exports. Finally, the paper will consider the export potential of these economies and discuss their respective needs for adjustment.

Two success stories: some macro data 1950s to 1990s

Dynamics and innovation in a Schumpeterian approach

According to Schumpeter (1912), continuously new combinations of productive factors, or innovations, lead to overall growth in a dynamic economy. In this tradition this paper considers 'export dynamics' to mean a continuous upgrading in the structure of exports, i.e. the inclusion of more and more sophisticated commodities, and/or the developing of new markets, plus subsequent growth in export volume. 'Innovation' will not be confined to *spectacular* 'new things' (products) or processes (see also Schumpeter 1951, p. 218). Differing from many recent studies on innovation (e.g. Grupp 1998), this paper will consider non-technological forms of innovation as equally important, particularly 'the opening of a new market, that is a

* The author would like to thank particularly Dr A.J.H. Latham (Swansea) for his very helpful comments on a previous version of this paper. Thanks are also due to Prof. Hitoshi Hirakawa (Tokyo), Mr Peter Kreuzberger (Beijing/Paris), Dr Bankole Oni (Bremen/Ibadan), and Prof. Karl Wohlmuth (Bremen) for their comments.

market into which the particular branch of manufacture of the country in question has not previously entered' (Schumpeter 1912, p. 66). This is important, as 'learning to market in the newer technologies can be and often is more difficult than learning to produce' (Freeman 1996, p. 169).¹ 'World novelty' is not considered necessary for products from catching-up economies.

Export growth

The success of Taiwanese exports dates back to the 1950s. From 1952 to 1965 exports grew on average by 11 per cent per year, and from 1965 to 1980 by a staggering 29 per cent per year. Mainland China's economic planners started to focus on export growth only after 1978. In the 1980s, few areas witnessed an export performance as dynamic as Mainland China² and Taiwan. The average annual growth rate of export value 1980–95 was 15 per cent in China and 13 per cent in Taiwan.³ In 1979, Taiwan ranked twenty-second and the Mainland thirty-fourth as areas of origin in world merchandise trade flows. Today, both have bypassed many areas, which were previously leading export economies, and in 1977 were ranked fourteenth (Taiwan) and tenth (Mainland China). (Figures in this paragraph were computed with data in TSDB 1996; WDI 1997, pp. 154–6; GATT 1991 and WTO 1998; more details are given in Table A1).⁴ The following paragraphs will discuss the structural changes causing – rather than accompanying – the growth in volume.

The history of Taiwan's post-colonial foreign trade can be divided into five phases (Fei, Ohkawa and Ranis 1985; Chaponnière and Lautier 1998). Each one represented a substantial diversification of the export structure and an upgrading of capital-intensity in production and the technology content of commodities. Thus they ousted previous exports – a process which can be termed Schumpeter's 'creative destruction'. The five phases can be described as follows (for more details on data see Figure 6.1 and Tables A2–A4):

- 1 Export expansion based on agricultural commodities. Imports consisted of manufactured consumer goods and producer goods (up to 1950).
- 2 Import substitution growth, based on export of processed agricultural commodities. Imports consisted of producer goods and a decreasing share of manufactured consumer goods (1950–62).
- 3 Export substitution (export diversification) growth based on processed agricultural and industrial commodities (clothing, yarns, toys, footwear, sport-related products). Imports consisted of food, manufactured consumer goods and producer goods (1962–70).
- 4 The second drive of import and export substitution growth, based on an increasing share of intra-industry trade in increasingly sophisticated commodities (especially electronics and NC-machine tools) (1970–86).
- 5 After 1986, due to a strong upward revaluation of the currency and increasing average unit labour cost, exports of all labour-intensive commodities decreased, and exports grew of hi-tech products, including newly developed ones (like computer notebooks). Between 1990 and 1996 exports in office machines and

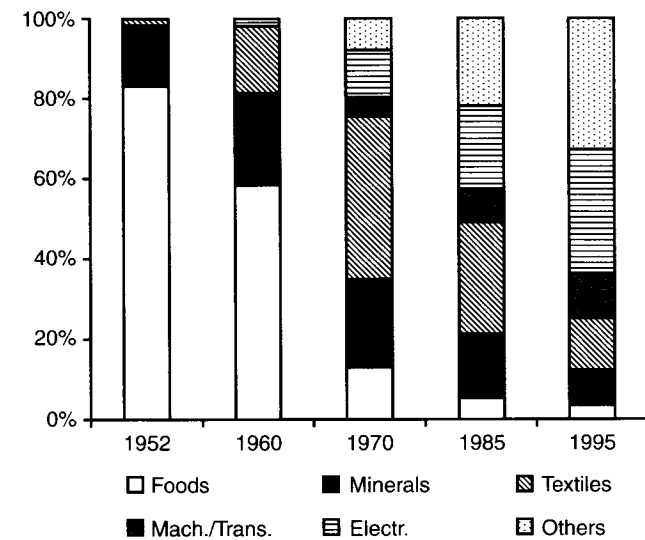


Figure 6.1 Taiwan's export composition 1952–95.

Source: See Table A2.

automatic data processing machines (SITC 75) and electrical machinery (Standard International Trade Classification (SITC 77)) increased threefold. An analysis on the 4-digit level of SITC groups reveals that exports of integrated circuits and automatic data processing machinery, including central processing units of computers, increased as much as fivefold (see Table A5). These subgroups represent the upper level in these commodity groups in terms of technology and knowledge content.

Although time-lagged, post-war Mainland China's foreign trade can also be interpreted as a series of upgrading steps (Lardy 1992; Bass and Wauschkuhn 1995; IBRD 1997; for more details see Tables A6 and A7 and Figure 6.2):

- 1 An inward looking economy, which only imported producer goods necessary to the framework of a central plan and could not be produced in the country itself. Textiles, raw materials, and agricultural by-products were exported to finance imports (1950–78).
- 2 Increased exports of petrol financed China's turn to the outside world and global markets (1978–85). In this period Mainland China's trade expansion was mainly due to petrol exports (having developed oil fields like Daqing in the 1970s), and other raw materials. Between 1981 and 1985 an increasing share of national petrol production was exported (1981: 14 per cent, 1985: 24 per cent (see Brender 1992, p. 35)). Yet world market prices of petrol declined sharply in 1986 (to 42 per cent of the 1983/85-average in 1986, and to 48 per cent in 1987). Chinese economic planners first tried to overcome deteriorating

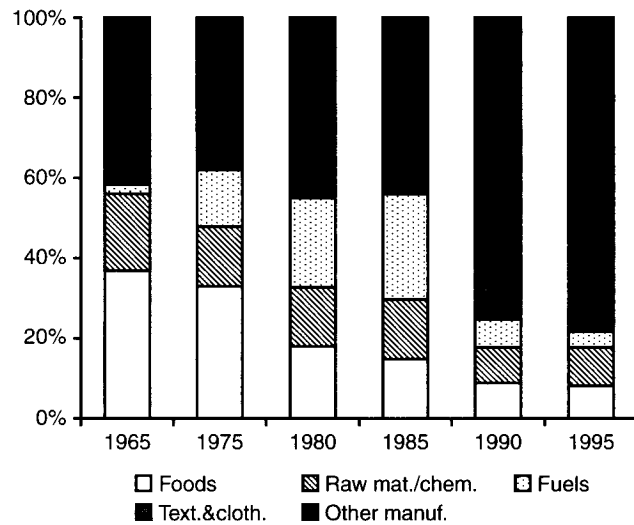


Figure 6.2 China's export composition 1965-95.

Source: See Table A6.

earnings by exporting increasing quantities, but soon redirected oil production to domestic industries, and began to concentrate on manufactured commodities for export.

- 3 'Export substitution' growth based on labour-intensive manufactured consumer commodities: textiles, shoes, plastic fabrics, particularly those manufactured in Sino-foreign joint ventures and rural collective industries. Imports consisted of producer goods (1985-mid-1990s). However, a new drive to rural industrialization in the early 1990s (imports of textile machinery of US\$10 bn) had triggered off overproduction of cottons. There was huge over-capacity in industry because state-owned enterprises could not be closed down. This led to flooding of world markets by Chinese textiles, which resulted in import restrictions by the USA, the EU, and Japan in 1996 (Becker 1997; see Table A8 for repercussions of previous import restrictions). China's present situation is different from the late 1980s, when China had to face export problems due to rapidly declining oil prices: oil production is capital-intensive whilst the textile industry is labour-intensive. Due to the social problems involved, a similar swift reduction in exports does not seem possible.
- 4 The most recent phase in the history of China's foreign trade can be described as an 'industrial-policy' attempt to export more sophisticated commodities (see Jing and Yang 1995). However, it is not yet clear whether these efforts towards a higher share of hi-tech exports will be successful.

The following section will link the growth in volume and change in structure by analysing growth rates and discussing the role of 'innovation' on a macro-economic level.

Decomposition of Growth

Following a method developed by GATT in the 1960s and refined by the World Bank's International Economics Department (see WDI 1997, p. 256-9), growth of nominal exports can be decomposed into three multiplicative factors:

- f_1 measures the growth due to expansion of the world market for the country's 'traditional exports',⁵ which will be called 'passive expansion';
- f_2 measures the growth due to expansion of market share for its traditional exports or 'active expansion';
- f_3 , measured as a residual, captures the growth in exports due to diversification into non-traditional exports.⁶

Taiwan's exports between 1963 and 1969, the first export substitution phase, grew by 21 per cent on average per year. Growth due to world market demand and market share expansion in traditional commodities contributed 55 per cent of this growth rate. Diversification contributed 45 per cent (computed with figures from YITS, various years; due to lack of data, it is not possible to further split up these figures).

A decomposition of growth of exports (data from WDI 1997, pp. 257-9) reveals that the bulk of Mainland China's overall export growth between 1984 and 1993/1994 (about 22 per cent per year) was due to an increasing share in world markets for the country's traditional export products. Nearly two-thirds of this export growth may be attributed to active expansion. Increase of world demand for traditional goods was responsible for less than one-third, whilst only about 10-15 per cent of growth in export volume was due to export commodity diversification.

The difference between Taiwan and Mainland China becomes obvious also from a different comparison: the top ten export commodities on the 3-digit level of the SITC contributed 72 per cent to Taiwan's overall exports in 1963, while the top ten SITC 3-digit groups contributed only 40 per cent to Mainland China's overall exports in 1980. This means that Mainland China's export commodities were considerably diversified at the start of its rapid export expansion phase. This resulted from China's industrialization in the 1950s to 1970s, isolated from the world market. That was a different, though not unblemished Chinese success story, nowadays often forgotten.

These findings imply that Mainland China's export expansion was less innovation-driven than Taiwan's export expansion in the same phase of export development. The pattern of Mainland China's export performance was different also from other latecomers to industrialization in East Asia, like Indonesia, Malaysia, and Thailand, whose export growth was due to growth in world demand and export diversification (see Table A9). Furthermore the Chinese pattern was also different from the present pattern of more industrialized countries in East Asia, like Japan

and the Republic of Korea as well as contemporary Taiwan. There, particularly in the period 1988–94, diversification predominantly meant expansion to the service sector.

Twisting the cord in the 1990s

Economic linkages between Taiwan and Mainland China

Previously, it was argued in this paper that there are similarities in the development process of Taiwan's and Mainland China's exports. The foreign trade pattern of Mainland China can be seen to be one phase behind Taiwan. This explains why the export performance of both economies is now linked by a dynamic regional interaction.⁷ According to Akamatsu's and Kojima's flying-geese pattern (Hobday 1996; Hwang 1998), economic development in East Asia is partly perceived as a transmission process between countries. If industries lose cost competitiveness in one country because of rising unit labour costs, production is transferred to an economically less advanced country. At the same time, the more advanced country builds up new, more capital- and technology-intensive production lines. This framework links a micro-economic or sectoral product life cycle theory and a theory of foreign trade based on specialization. However, it can also be understood as a Schumpeterian process of innovation and imitation (Welfens 1989, p. 46).

The basic linkage instrument between the economies of Taiwan and Mainland China is foreign direct investment. Mainland China policy planners after 1978 based their development strategy on the inflow of foreign investment and enforced policies to attract foreign investment in the early 1990s, as pointed out in the previous section. There were several reasons for Mainland China planners to be interested in investment from Taiwan. Taiwanese enterprises had experience in supplying world markets with light-industry products. They targeted markets in the industrialized economies rather than the domestic Mainland China market. Finally, there were intentions by policy-makers to strengthen non-political relations across the Taiwan Strait (Herrmann-Pillath 1994, p. 131, referring to Maruyama Nobuo (ed.) *Kanan keizai-ken* 1992).

Meanwhile, Taiwanese enterprises were keen to invest overseas, and when Taiwanese restrictions on investing in Mainland China were revoked from 1990, they wanted to invest in China. This was because unit labour costs had been rising during industrialization due to changes in availability of labour, capital, and ecological resources. Since 1985 there had been continuing trade surpluses with the main export market, the United States, and this had led to pressure by the USA to adjust the trade balance. So, the Taiwanese currency was upvalued. Another reason was that there were lower transaction costs in an environment with cultural affinity. More recently, market-seeking investments have become important. Finally, investment incentives for Taiwanese *tongbao* (compatriots) may have played a role, such as the positioning of the four original Special Economic Zones in nearby Fujian and Guangdong provinces. Taiwanese enterprises were allowed to supply the domestic market earlier than foreign enterprises. However, the net effect of these

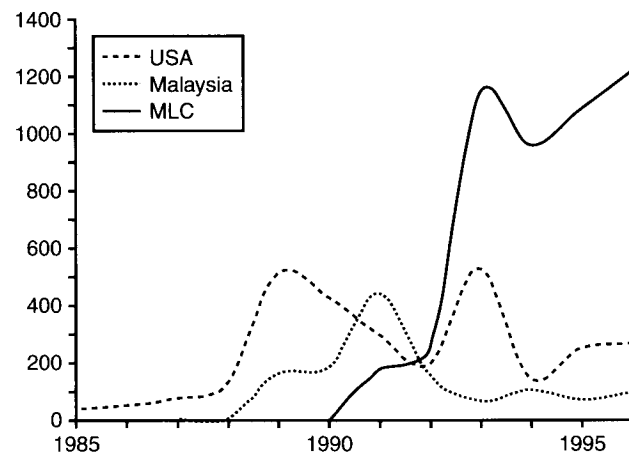


Figure 6.3 Taiwanese direct investment in various countries 1985–96 (outflows per year in mill. US\$).

Sources: TSDB 1996; InvCom, Statistics ... (Tongji Yuebao), Dec. 1996. 1993 data for Mainland China adjusted with an estimation by Long 1994.

incentives, set against a lack of bilateral investment protection agreements, can be questioned.

Direct investment by Taiwanese enterprises – officially recorded since 1990 (see Figure 6.3) – has contributed heavily to the productive potential of mainland enterprises. According to Mainland China data, nearly 60 per cent of 1995 cumulative foreign investments came from Hong Kong – much from disguised Taiwanese sources, as Hong Kong dummy investors were used by Taiwanese companies to overcome legal obstacles for investment in Mainland China. This was particularly so prior to 1990.

In 1995, about 18 per cent of gross investment in Mainland China came from abroad,⁸ but 30 per cent of Mainland China's exports came from foreign-funded companies. According to official mainland sources, 10 per cent of foreign direct investment in the mainland currently comes from Taiwan. Taiwanese investments in Mainland China have significantly stimulated export volumes and have contributed to the upgrading of Mainland China's export structure. On the other hand, there was product and process innovation in some sectors of the Taiwanese economy, which kept production lines in Taiwan in spite of rising wages.

These observations now set the stage for investigating the performance of Chinese exporters in geographically defined commodity markets.

Market share development

Previously similar phases of export development were compared at different points in history.⁹ The present section compares the export performance of different devel-

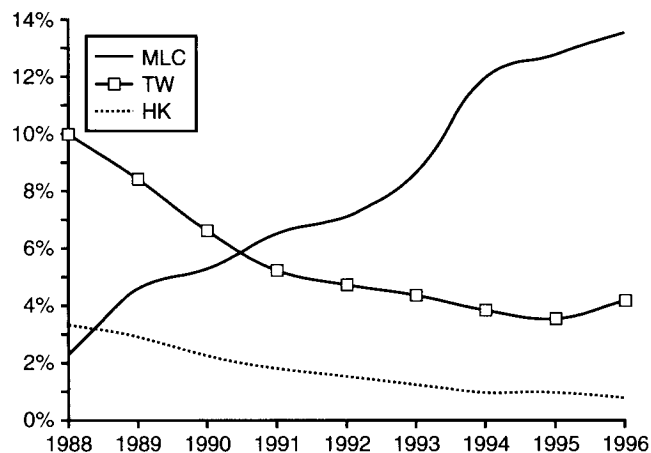


Figure 6.4 Chinese SITC-76 import market shares in USA 1988-96.

Source: See Table A8.

opment phases at the same point in time. With data from the three largest world markets, the USA, Japan and Germany (see Table A8) it is possible to distinguish three patterns of Chinese market share development in the 1990s.

The first pattern depicts a situation where the market share of Taiwanese exporters (and those from Hong Kong) fell, while Mainland China's share increased. This is a development which can be explained by the flying-geese model: the more advanced economy loses comparative advantages in labour-intensive industries, while the less advanced one is able to succeed in these markets, an effect triggered by the movement of Taiwanese industries to Mainland China, e.g. in electronics (see Table A10).

A good example is telecommunications (SITC 76), including television and radio receivers, sound recorders, and television recorders. As can be seen in Figure 6.4, the Taiwanese share of the US import market for these products fell from 8 per cent to 4 per cent in the early 1990s, Hong Kong's share fell from 3 per cent to 1 per cent, while Mainland China exporters increased their share from 5 per cent to 13 per cent. The overall increase of the 'Greater China' Economic area, however, is not really significant. The products, whose exports developed like this pattern, can be characterized as 'Heckscher-Ohlin-type goods' (Giersch 1984): their factor prices determined the export performance.

In the second pattern, both Taiwan and Mainland China exporters increased their market share (see Figure 6.5). However, Mainland China may have only gained what Hong Kong lost because workshops were transferred from Hong Kong to Mainland China's Shenzhen. Examples like this are office machinery and automatic data processing exports to Germany and Japan.

The Standard International Trade Classification group 75 (SITC-75), office machinery, includes photo-copying machines, personal computers and other types of automatic data processing machines. Most of these can be classified as

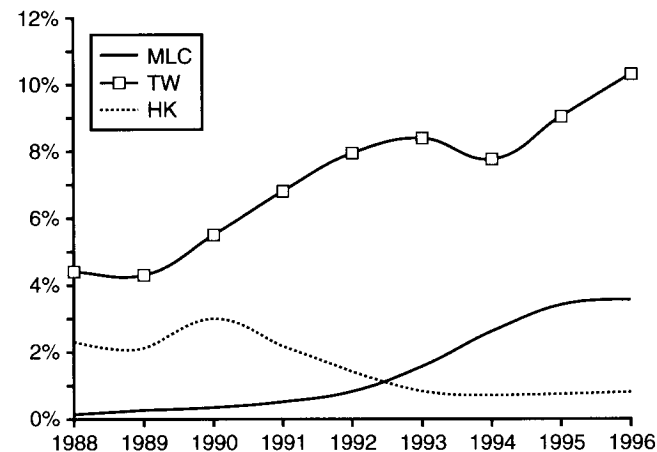


Figure 6.5 Chinese SITC-75 import market shares in Japan 1988-96.

Source: See Table A8.

'Schumpeter-type products', incorporating a high share of R&D expenditure and rapid product and process innovation. Thus, these products are not only competitive by price, but also in technology ('the Schumpeter-type competition'). Taiwanese notebooks – a particular case in point – constitute one-third of world exports, mice 80 per cent, and scanners 70 per cent (Gälli and Franzen 1995, pp. 163-6; Chaponnière and Lautier 1998, p. 244). For these products, Taiwan is a leading exporter, producer and developer. So, this case cannot be interpreted in the framework of the flying-geese model, the transfer of production and export capabilities from Japan to Taiwan (and other NICs).

The third pattern of market share behaviour describes a situation where the gains of Mainland China exporters heavily outweighed Taiwanese losses in market share (see Figure 6.6). Striking examples are footwear (SITC 85) exports to Japan and the USA, and clothing in Japan. These products, although also of a Heckscher-Ohlin-type, are different from the first type, as they are easy to imitate, and product cycles are extremely short.

We may conclude that only the second and third patterns are true examples of market innovation, because in the first pattern the shift from one area of origin to the other seems partly due to foreign direct investment in Mainland China from Taiwan. This is an innovation in production location rather than a market innovation. Yet, the two patterns do not fit neatly into the 'innovators' and 'imitators' of the flying-geese pattern, and suggest an innovation in its own right.

In the following section factors will be discussed which may be relevant for the future development of such innovations in Mainland China and Taiwan. The discussion will refer to export promotion policies and to the two most striking differences between the Mainland China and the Taiwan export systems: the size of the enterprises in the export business, and the behavioural flexibility of the companies.

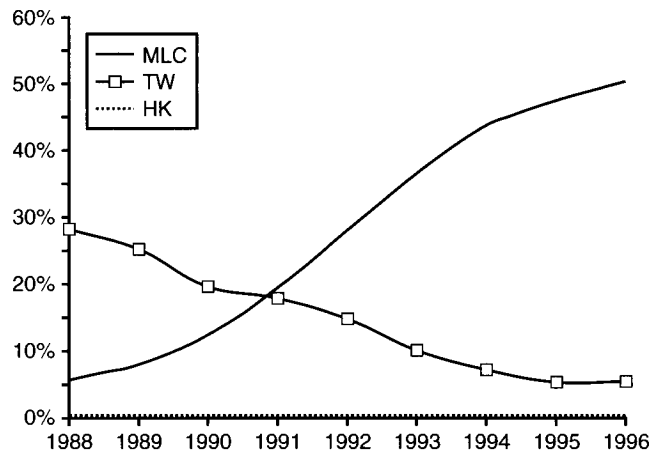


Figure 6.6 Chinese SITC-85 import market shares in Japan 1988–96.

Source: See Table A8.

A strong common future? Some conjectures

Export promotion policies

With regard to fostering innovation, three kinds of economic policy can be discerned. First, an optimistic view of the capability of markets to organize production efficiently, at least in the long run (as expressed in Schumpeter's early views, see Schumpeter 1912). This allows the dynamic elements of an economy, the entrepreneurs, to realize their ideas without much interference by the state. It also tolerates the destruction of enterprises or branches which cannot adjust to the changing economic environment. With respect to catching-up economies, this sort of policy would basically provide information to economic actors, overcome institutional hindrances, and open up possibilities for the private sector, e.g. it allows high rates of profit for the entrepreneurs (see Laumas 1962).

Second, an interpretation of the innovation process in line with the later Schumpeter (1942–47), favours government policy which allows institutional arrangements for 'orderly' structural change, and targets sunset industries and sunrise industries with detailed programmes.

Third, innovation policy can derive from a more complex, 'neo-Schumpeterian' understanding of the innovation process (see Freeman 1987), which stresses the importance of innovation *systems*, 'sets of institutions whose interactions determine the innovative performance of national firms' (Nelson and Rosenberg 1993, p. 4). Such policy will promote the National Innovation System, i.e. the technological and institutional capability of a country to innovate, rather than target individual branches of industries. The export policies of the Taiwanese and Mainland China governments will now be evaluated in the light of these approaches.

Particular items providing better export opportunities for enterprises in Taiwan

included (cf. IBRD 1993, pp. 259–346; Chowdhury and Islam 1993; Herderschee 1995, pp. 69–102) tariff rebates on inputs for exports (in the early 1950s) and the establishment of export processing zones with fewer regulations on production. These began in 1965 in Gaoxiong. The share of export processing zone production in total exports was at most 9 per cent in the early 1970s. Furthermore, there were institutional or legal restrictions to entry into the domestic market. Meanwhile production for export was open to new entrants, thus upgrading the production and variety of exports (see Krugman 1983 for more general support for this argument). In Taiwan, industrial policy was geared towards developing new production lines, and was closely linked to trade policies targeting new export markets. This included intra-industry subsidies via taxes on domestic sales, export loans (see IBRD 1993, p. 282), the promotion of small and medium enterprises, and marketing and information assistance (such as fairs or linking up enterprises with counterparts overseas).

Direct support for export enterprises seems to have been strong in the 1950s. However, government promoted exports by using a firm's export performance as a basic criterion for judging access to imports. This was a self-enforcing process, a combination of private-sector dynamism with supportive rather than dirigist government (Chaponnière and Lautier 1998). Later support was indirect only, and by the beginning of the 1990s, most commodity-based export incentives had been phased out. More subtle interactions between government agencies and private enterprises emerged.

The most important economic policy in Mainland China contributing to export success was the freeing of enterprises from the central plan. Mainland China's foreign trade organization in the early 1980s concentrated on making enterprises more autonomous. In the second half of the 1980s the agency system allowed competing Foreign Trade Corporations to take over export commissions (Herrmann-Pillath 1995, p. 149). Until the mid-1980s, potential exporters were offered fixed prices by the Foreign Trade Corporations. For most of these commodities the prices were the same as the domestic market, thus giving individual enterprises no incentives to export and channelling any gains from exports into central funds. Price reforms, allowing exporters to gain from world demand, contributed to export expansion. Although these changes were an important step towards efficiency, Mainland China's external sector still does not allow equal competition. Foreign-funded enterprises may import for their own purposes and export their own products, but Foreign Trade Corporations still market domestic-funded enterprises overseas, apart from a few large corporations. The number of Foreign Trade Corporations is very small in comparison to other economies: about 0.3 Foreign Trade Corporations per 100,000 inhabitants, compared to 8 in Japan, 31 in Germany, and 190 in Taiwan.

The second crucial instrument in Mainland China's export promotion policy was the attraction of foreign direct investment. There were regional investment incentives, like the reduction of corporate tax in the Special Economic Zones and other investment promotion zones (such as the Open Coastal Cities). Foreign direct investment significantly contributed to the upgrading of Mainland China's

production structure. From 1995 policy planners did not try to attract foreign investment with regional incentives but with technology-oriented selection criteria. Also new institutions were established, such as the Import/Export Bank, to facilitate hi-tech exports (see Bass 1996). This will be referred to later, when discussing responses to a changing international economic environment. Constraints include stagnating markets and income-inelastic demand for traditional Chinese manufactures, like textiles, and also the national need for labour intensive production. Other ways of promoting export in Mainland China in the 1980s included selective input subsidies and the gradual devaluation of the currency, thus reducing the general bias against exports (see Bass 1996).

With regard to the three innovation-oriented approaches to public policy, we may place Taiwan's present export promotion policy in the second and third category, while Mainland China's policy is still in the first and second. In Taiwan, 'guided capitalism' or 'governing markets' (Wade 1990) was successful in the early, or easy periods of the catching-up, and under favourable international conditions. Whether this approach will continue to be successful in the more complex economic environment at the beginning of the twenty-first century, remains to be seen, as state administrations may not be able to keep pace with the need to process information adequately.

Typical size of enterprises and innovative potential

While Schumpeter originally (1912) saw the new small-scale entrepreneur as the source of innovation, he later thought that big business was the most innovative form of enterprise. Large enterprises have R&D departments and buy specialist knowledge. The 'neo-Schumpeterian hypothesis' thus argues that technological innovation is a function of size¹⁰ and has positive returns to scale (Wakelin 1997; for an overview of the vast literature about the related issue of market structure and innovation see Baldwin and Scott 1987;¹¹ Rothwell and Dodgson 1996). Some neo-Schumpeterians (e.g. Wakelin 1997) tested the statistical relation between firm size and technological capability by econometric cross-country studies. They also examined the influence of technological capability on the economies' export performance, including embodied and disembodied technology, such as workforce qualifications. Not surprisingly the impacts are strong when industrialized countries are considered. This section will just consider the effect of the different sizes of foreign trade enterprise in Taiwan and Mainland China on innovation.

Taiwan generally is believed to be the paradise of small enterprises. According to a recent official definition, more than 95 per cent of Taiwan's enterprises are of small or medium size. Economic planners in Taiwan in the past, impressed by the successes of the General Trading companies of Japanese conglomerates, the *sōgō shōsha*, attempted to support the development of similar enterprises. However, in Taiwan these large trading companies never really took off. Incentives were very modest, at least compared to what was offered in Korea to support a replication of the Japanese model; competition from foreigners, particularly Japanese trading companies, was fierce; and large trading companies got little support from local

business groups (IBRD 1994, p. 112). The dominant form of trading company, of which there are presently about 40,000, is extremely small and specialized. These enterprises and small local manufacturers themselves handled two-thirds of Taiwanese exports in the 1980s. Now their share has declined to about half of Taiwanese exports (see Table A11).¹² With increasing sophistication of products, small enterprises in Taiwan have clearly lost some of their export competitiveness.

In China before 1978 all foreign trade was carried out by a dozen Foreign Trade Companies, each of which had a monopoly in a particular group of commodities. After 1978, in China's move from a centrally planned economy to a market economy, new Foreign Trade Corporations were created. Provincial branches of national Foreign Trade Corporations became independent, and new Foreign Trade Corporations were created at the provincial or municipal level.

These days, several thousand Foreign Trade Corporations exist, many trading in the same sort of commodities. There is a two-layer structure of exporters. There are actual traders, including the Foreign Trade Corporations and some large companies, which are allowed to trade their own products, and there are producers. At the production level, a high share of exports comes from enterprises with foreign investments, either joint ventures with a Chinese partner or wholly foreign-owned ones, and from rural 'collective' enterprises (see Taubmann 1996; Deng and Wang 1997). Apart from petty commodity production these are the most decentralized sectors of the Chinese economy. The domestically funded small- and medium-scale enterprises normally do not have an export license, so exports are still channelled through the bigger trading companies (see Tables A12 and A13). The larger ones still dominate: the 10 largest foreign trade companies in Mainland China traded about US\$37 bn of imports and exports, i.e. approximately 15 per cent of Mainland China's total foreign trade in 1995 (<http://www.chinatoday.com/trade/a00.htm>).¹³

The institutional changes so far seem to have been a precondition for changes in China's export structure. Primary products are homogenous goods sold on international markets at world prices, and little marketing knowledge is needed to sell them. Manufactured goods are more heterogenous and require a more sophisticated understanding of consumer tastes, quality standards etc. (Lardy 1992, p. 697). In future, China may have to carry out more institutional reforms in order to improve its export system, e.g. by further expanding the 'agency system'.

Economies of scale help to increase a company's market share in traditional export commodities, but diversification seems to require a more decentralized marketing structure.

Schumpeter's later conjecture that 'the perfectly bureaucratized giant industrial unit ... ousts the small and medium-sized firm ...' (Schumpeter 1942; 1947, p. 134), does not seem plausible in China's case. With the increasing sophistication of export products, the most favourable type of enterprise in the foreign trade sector seems to be neither very small nor very large. The bureaucratic management of large companies can counteract benefits from economies of scale and scope,¹⁴ and lack of access to local resources counteracts the benefits of the small-scale traders' flexibility. Yet the issue of flexibility in economic behaviour is far more complicated

than a straightforward correlation with the size of a company may reveal. This issue will be discussed below.

Capabilities for adjustment

This section discusses the adjustment processes exporters have to face due to changes in world demand. We will start with a review of two concepts helpful in this context, 'creative/adaptive responsiveness' and 'flexibility'.

In an article for the *Journal of Economic History*, Schumpeter distinguished 'different kinds of reaction to changes in "condition"' 'Whenever the economy or an industry or some firms in an industry do something [...] that is outside of the range of existing practice, we may speak of creative response', in contrast to the 'adaptive response'. There are three characteristics of creative response. First, 'it cannot be predicted by applying the ordinary rules of inference from the pre-existing facts'; second, 'creative response shapes the whole course of subsequent events and their long-run outcome [...] or, to put it differently, it creates situations from which there is no bridge to those situations that might have emerged in its absence'; lastly, creative response has to do with 'quality of the personnel' available in a society, and in the particular field of activity, and with 'individual decisions, actions, and patterns of behavior' (Schumpeter 1951, p. 217).

A related concept is *flexibility*, narrowly defined as adaptation to changing demand by reorganization of production (Piore and Sabel 1984; 1989). The pre-condition for economic flexibility is a low dependency on particular resources (hence: 'flexible specialization'). A wider definition refers to the ability to react quickly to new circumstances, or to keep intellectual and other assets in a relatively fluid form, i.e. to have a great number of options available (Killick 1995; Klein 1988, p. 105).

Schumpeter argued that innovation needs long-term planning and planning security, i.e. a stable economic environment, a temporary monopoly, or patent protection. However, this may create rigidities for short-term reaction. A trade-off between short-term and long-term flexibility exists: 'using less specific assets may increase flexibility in the short run, but may reduce it in the long run' (Chang Hajoon 1995, p. 204) – high short-term flexibility may create unnecessary failures.

Chinese family businesses, as prevalent in Hong Kong and Taiwan, are typically very specialized in scope. Normally they focus on one market or one product only. Decision making is strictly hierarchical. According to studies in business sociology (Redding 1990; Fukuyama 1995), they are characterized by a high degree of centralization, i.e. personal direction. Ownership, control and family are closely inter-related. They are, incidentally, the prototype of Schumpeter's bourgeois family background for capitalist enterprises.

Normally speaking, growth in size of organization leads from centralization to structuralization. This includes specialization, i.e. division of labour between the persons and organizational departments concerned. It also includes standardization, like formal job descriptions, and formalization of work procedures. However, according to Redding this is not the case in the Chinese family businesses:

because trust is limited to the family, power is person-embodied and authority subsists only with the owner's family. Thus paternalism rules, i.e. big and small problems are decided by the boss. External relations of the enterprises are governed by personal relations rather than by formal arrangements, like subcontracting. This can ensure a high degree of flexibility or adaptability. Among the advantages of this type of organization are speed in decision making and a high degree of confidentiality in business information. As regards cross-border trade, the advantages of the Chinese family business can be seen in world market segments, characterized both by rapid change and by strong segmentation (Fukuyama 1995, p. 106), e.g. textiles, apparel, toys, plastics. The Chinese-type family business has a comparative advantage in gaining an overview of a particular market segment (see also Piore and Sabel 1984 for an assessment of market segments particularly suited for small-scale enterprises).

There are, however, several disadvantages which occur as enterprises grow. If family relations are more important for promotion than expert knowledge, the middle management may get frustrated. According to Redding, organizations with these restrictions cannot divisionalize, but stay small or continue to grow with the same organizational structure. So Chinese family businesses are non-permanent structures and tend to break up in the third generation, as argued by Fukuyama.

Although the Confucian family tradition is an important cultural heritage, the new global economic environment may be a stronger challenge. Getting into more sophisticated commodities needs adaptation, e.g. the incorporation of skills and knowledge from outside the family. According to Porter (1996) the typical Chinese-Asian family enterprise, has some advantages, but they diminish in the present world economic environment (see Table below).

Taiwan had a family-based business ethic and economic rationality, but family orientation did not have a place in business during most of the post-war history of

Table 6.1 Advantages and disadvantages of Asian enterprises under different framework conditions

Framework conditions	Advantages	Disadvantages
<i>Many chances:</i> positive climate of world economy	<ul style="list-style-type: none"> • long-term orientation in goals • intuitive action 	
<i>Many changes:</i> complex problems demanding high co-ordination capability		<ul style="list-style-type: none"> • no focused strategies but opportunistic operations • repetition of formerly successful strategies in less developed regions • over-diversification, lack of continuity (e.g. no brand names, no control of marketing channels)

Source: Adopted from Porter 1996.

Mainland China. With regard to behaviour, during the time of great political uncertainty risk avoidance was rewarded (see Redding 1993, p. 235). Some authors, however, point to the fact that the Sino-Stalinist development path did allow for some flexibility niches. The failure of formal institutions demanded flexible informal relations for survival (Herrmann-Pillath 1996, p. 13). Flexibility was a basic condition of life. With regard to enterprises, it should be mentioned that not all enterprises were subject to central planning. Rural industrial enterprises were allowed to act independently (Donnithorne 1972). Today's managers, the one-time activists of the cultural revolution, may never have been used to stable institutions (Herrmann-Pillath 1995, p. 129).

Economic flexibility depends also on access to information and information-processing capacity. The quantity of information increased with Mainland China's opening to the outside world. The capacity to process this information increased in the 1980s with more and more market mechanisms allowed. Prices, as argued by von Hayek (e.g. 1967) contain more information on market demand and supply than a central plan can contain.

Another aspect of flexibility becomes obvious when discussing the relation between individual Foreign Trade Corporations and the central authorities. In Mainland China, three categories of external trade can be distinguished according to the information, allocation and control mechanisms: centrally planned, government-guided, and market-guided. For the 1980s the share of the three categories is estimated to be 50–60 per cent centrally planned, 20 per cent guided, and 20–30 per cent free (Gerhald, cited in Sekiguchi 1990, p. 397). Sekiguchi estimates exports under direct plan in 1988 to amount to 30 per cent, those under the foreign exchange quota, i.e. 'centrally guided trade', as 20 per cent of total exports. In the 1980s, Foreign Trade Corporations decided their export supply volume according to international prices rather than simply filling their foreign-exchange delivery quota. More independence for individual Foreign Trade Corporations, granted in the course of economic reforms from 1984, also allowed more flexible behaviour. In the 1990s, deregulation progressed further. In particular, exporters in the 1990s were permitted to retain a portion of their foreign exchange earnings.

Finally, however, there is a strong constraint on the flexibility of the entire export structure due to the structure of domestic production. The national political rule is to hold back 'destruction' if an alternative does not create necessary job opportunities. State-owned enterprises in China are in a desperate condition. This is particularly true of the textiles industry. Over past decades central authorities reinvested too little profit from these enterprises, causing them to be short of capital and of too low a technological standard to be competitive. The implications of this situation have been discussed above.

This brief overview suggests there is need for further institutional innovation in both economies in order to cope with new challenges of world trade. This may mean a more structured organization of enterprises in Taiwan, and more individual responsibility in enterprises in Mainland China. The idea of a convergence in the type of business organization does not seem out of place, suggesting there are

potential opportunities for more interaction between the economies of Taiwan and the Mainland, which again can speed up dynamics in this sector.

Appendix

Table A1 Change in merchandise exports, Taiwan and Mainland China 1979–97 (%)

	1979/1989	1989/1997
Taiwan	+311	+185
Mainland China	+279	+352
Top-25 Exporters*	+103	+178

Sources: GATT 1991; WTO 1998. Lardy 1992, p. 694, however, reports MOFTEC data which even indicate a percentage change of 316% for the first period for Mainland China.

Note: Share of the Top-25 exporters in world trade: 83% (1989) and 84% (1997).

Table A2 Volume and composition of Taiwan's exports 1952-95

Year	Value (US\$ mill.)	Food (%)	Agric. prod., basic metals (%)	Mineral and metal products, chemicals (%)	Textiles (%)	Machinery, transport equipment (%)	Electrical machinery (%)	Others (%)
1952	117	84	12	3	1	0	0	0
1960	164	58	16	7	17	0	1	1
1970	1,481	13	13	8	42	4	12	8
1985	30,726	5	4	12	28	8	21	22
1995	130,257	3	(9)		13	11	31	33

Source: TSDB 1988; computation from OECD, ITCS Rev. 3, 4/1998 [Food etc. = SITC 0-1; Minerals etc. = SITC 2-5; Textiles = SITC 65 + 84; Machinery and Transport Equipment = SITC 7 excluding SITC 75-77; Electrical Machinery = SITC 75-77].

Table A3 Main export products of Taiwan (representing 75% of export value) 1951-69 (%)

1951	1960	1962	1969
Sugar 53	Sugar 44	061 Sugar 21	841 Clothing 12
Rice 12	Fruits 9	651 Textile yarns 7	724 Telecom. app. 9
Tea 8	Cotton fbr. 7	652 Cotton fabrics 6	631 Plywood 6
Fruits 7	Tea 4	054 Vegetabl., fresh 5	051 Fruits, fresh 5
	Rice 3	053 Fruits, prep. 5	652 Cotton fabrics 5
	Steel bars 3	841 Clothing 5	651 Textile yarns 5
	Citr. oil 2	051 Fruits, fresh 4	061 Sugar 4
		551 Essential oils 4	893 Art. of plastic 4
		074 Tea 3	055 Vegetable, prep. 4
		042 Rice 3	054 Vegetabl., fresh 3
		661 Cement 3	053 Fruits, prep. 2
		24x Wood 2	894 Toys 2
		332 Petrol. products 1	851 Footwear 2
		581 Plastic materials 1	653 Text. fabr. nes. 2
			69x Manf. of metal 2
			243 Wood 2
			074 Tea 1
			031 Fish 1
			73x Transport equip. 1
			899 Manf. art., nes. 1
			661 Cement 1
			717 Textile machines 1

Source: Own computations from YITS, United Nations, *Yearbook of International Trade Statistics*, various years, New York. Classification according to SITC, Rev. 1, is available for 1962-69 only. After 1969, Taiwan's trade is no longer reported by this source.

nes = not elsewhere specified.

Table A4 Main 20 SITC 3-digit level export products of Taiwan 1990-95 (%)

SITC 1990	Share	SITC 1995	Share
752 Automatic data proc. machines	6	776 Cathode valves & tubes; diodes; integrated circuits	9
851 Footwear	5	752 Automatic data proc. machines	7
894 Baby carriages, toys, games & sporting goods	5	759 Parts, accessories for machines of groups 751, 752	7
764 Telecommunication equipment	4	764 Telecommunication equipment	4
776 Cathode valves & tubes; diodes; integrated circuits	4	785 Motorcycles & cycles	3
759 Parts, accessories for machines of groups 751, 752	3	653 Fabrics, woven, of man-made fabrics	3
893 Articles of plastics	3	894 Toys, games & sporting goods	3
653 Fabrics, woven, man-made	3	699 Manufactures of base metal	2
785 Motorcycles & cycles	2	893 Articles of plastics	2
699 Manufactures of base metal	2	651 Textile yarn	2
651 Textile yarn	2	772 Apparatus for electrical circuits	2
821 Furniture & parts	2	657 Special yarn, special textile fabr.	2
761 Television receivers	2	778 Electrical machinery & apparatus	2
778 Electrical machinery & apparatus	2	655 Knitted or crocheted fabrics	2
655 Knitted or crocheted fabrics	2	761 Television receivers	2
772 Apparatus for electrical circuits	2	821 Furniture & parts	2
899 Misc. manufactured articles	2	728 Other machinery for particular industries	2
657 Special yarn, special textile fabrics & related	1	771 Electric power machinery, and parts	1
724 Textile & leather machinery	1	12 Other meat and edible meat offal	1
728 Other machinery for particular industries	1	694 Nails, screws, nuts, bolts, rivets of metal	1

Source: Computation from OECD, ITCS Rev. 3, 4/1998.

Table A5 Main SITC 4-digit level export products of Taiwan in office machinery and electrical machinery (SITC 75 and 77) 1990-96 (in US\$,000)

SITC	1990	1996	Increase (%)
7599 Parts of typewriters, calculating mach. etc.	2,284,025	8,035,994	352
7764 Electronic integrated circuits & microassemblies	1,350,388	7,705,943	571
7522 Dig. autom. data proces. machines, cent. proc. unit	1,013,701	5,449,240	538
7526 Input or output units, whether or not with storage	1,851,699	4,195,210	227
7712 Other electric power machinery	597,945	1,581,003	264
7722 Printed circuits	406,370	1,545,897	380
7788 Electrical machinery & equipment, n.e.s.	577,246	1,394,639	242
7761 Television picture tubes, cathode ray	373,422	1,061,833	284
7763 Diodes, transistors, semi-cond. devices	418,972	918,841	219
7731 Insulated wire, cable & other insulated conductors	463,197	765,031	165
7527 Storage units	599,379	596,596	100
7725 Apparatus for elect. circuits < 1000 volts	312,689	540,285	173
7529 Data processing equipment, n.e.s.	202,496	526,213	260
7786 Electric capacitors	295,933	470,573	159
7762 Other electronic valves and tubes	226,045	450,412	199

Source: Computation from OECD, ITCS Rev. 3, 4/1998.

Table A6 Volume and composition of Mainland China's exports 1965-95

Year	Value (US\$ mill.)	agric. raw mat. (%)	foods (%)	fuels (%)	ores etc. (%)	chemic. (%)	text. & clothing (%)	other manuf. (%)
1965	1,718	11	37	2	4	4	21	21
1975	6,303	7	33	14	3	5	18	20
1980	18,237	6	18	22	3	6	22	23
1985	27,764	7	15	26	3	5	26	18
1990	80,541	3	9	7	2	4	29	46
1995	148,780	2	8	4	2	6	26	52

Sources: 1965-90: IBRD 1994: 5; 1995: computed from OECD, ITCS Rev. 3, 2/1997. Foods: SITC 0 + 1 + 22 + 4; Agricultural raw materials: 2 less 22, 27, 28; mineral fuels: 3; ores etc.: 27 + 28 + 68; textiles and clothing: 65 + 84.

Table A7 Main export products of Mainland China 1980-95 (%)

1980		1985		1995		
Crude oil	15	Crude oil	19	851	Footwear	4
Processed oil	7	Processed oil	5	841	Men's clothing (tex)	4
Knitted goods	6	Knitted goods	4	842	Women's clothing (tex)	4
Cotton cloth	4	Cotton cloth	3	845	Apparel (tex)	4
Rice	2	Cotton	1	894	Toys, sporting goods	4
Coal	1	Canned goods	1	764	Telecom. equipment	3
Tea	1	Mixed yarn	1	652	Cotton fabrics, woven	2
Slaughter hogs	1	Coal	1	899	Misc. manuf. articles	2
Silk goods	1	Silk goods	1	831	Travel goods, handbags	2
Rattan manuf.	1	Tea	1	848	Apparel excl. textile	2
"Top Ten"	40	"Top Ten"	40	"Top Ten"		32

Sources: 1980, 1985; Yabuki 1995, p. 156 (from: *China's Commercial and Foreign Economic Statistical Materials 1952-1988*, pp. 464-75). For COMTRADE statistics, using reported partner country data and being quite different from these data, see Yeats n.d., pp. 46-7. 1995: computed from OECD, ITCS Rev. 3, 2/1997.

Table A8 Greater China's import shares in major markets of industrial economies

	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>I.1 Mainland China → USA</i>										
SITC 75 Office mach.	0.0	0.2	0.3	0.4	1.0	1.5	2.2	3.1	4.7	5.4
SITC 76 Telecom / Sound	0.2	2.3	4.6	5.3	6.5	7.1	8.6	11.9	12.7	13.5
SITC 77 Electr. mach.	0.1	1.4	1.7	2.0	2.6	3.5	3.8	4.1	4.2	5.3
SITC 84 Apparel	6.5	9.6	12.0	13.7	14.8	16.5	18.4	17.2	14.9	15.3
SITC 85 Footwear	1.0	4.2	8.8	15.7	26.8	33.8	40.7	45.2	48.4	50.3
<i>I.2 Taiwan → USA</i>										
SITC 75 Office mach.	7.5	10.1	10.3	11.6	12.6	12.7	12.4	11.8	11.8	12.5
SITC 76 Telecom / Sound	9.5	10.0	8.4	6.6	5.2	4.7	4.3	3.8	3.5	4.1
SITC 77 Electr. mach.	7.2	8.5	7.3	6.6	6.4	6.8	7.0	6.9	6.9	7.2
SITC 84 Apparel	15.4	13.2	11.4	9.7	10.2	7.9	6.9	6.2	5.5	5.0
SITC 85 Footwear	30.6	28.8	23.8	15.9	12.2	8.3	5.2	3.9	2.9	2.0
<i>I.3 HK → USA</i>										
SITC 75 Office mach.	4.5	3.4	3.6	3.0	2.6	2.3	2.1	1.5	1.2	0.9
SITC 76 Telecom / Sound	3.2	3.3	2.9	2.2	1.8	1.5	1.2	0.9	0.9	0.7
SITC 77 Electr. mach.	4.3	3.6	2.5	2.4	2.4	2.2	2.2	2.0	2.2	2.3
SITC 84 Apparel	21.8	17.1	16.2	15.7	15.5	14.0	12.0	12.0	11.0	9.7
SITC 85 Footwear	1.7	1.8	1.5	1.2	1.1	1.2	1.2	1.1	0.9	0.6
<i>I.4 'Gr. China' → USA</i>										
SITC 75 Office mach.	12.0	13.7	14.2	15.0	16.2	16.5	16.7	16.4	17.7	18.9
SITC 76 Telecom / Sound	12.9	15.7	15.9	14.1	13.5	13.3	14.1	16.8	17.1	18.3
SITC 77 Electr. mach.	11.6	13.5	11.5	11.0	11.4	12.5	13.0	13.0	13.3	14.8
SITC 84 Apparel	43.8	39.9	39.6	39.1	40.4	38.4	37.3	35.5	31.4	30.0
SITC 85 Footwear	33.2	34.8	34.1	32.7	40.1	43.3	47.2	50.1	52.2	52.9

Table A8 Continued

	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>2.1 Mainland China → Japan</i>										
SITC 75 Office mach.	0.0	0.4	0.4	0.5	1.0	0.9	2.7	3.3	4.6	7.0
SITC 76 Telecom / Sound	1.1	2.4	4.5	5.2	5.9	9.2	11.6	12.7	14.5	15.6
SITC 77 Electr. mach.	0.3	0.7	1.4	2.1	3.1	4.1	5.2	5.9	7.1	9.0
SITC 84 Apparel	22.9	21.6	24.7	27.4	34.6	43.4	49.8	53.9	56.6	59.4
SITC 85 Footwear	8.9	5.6	7.9	12.3	19.1	27.7	36.1	43.5	47.3	50.3
<i>2.2 Taiwan → Japan</i>										
SITC 75 Office mach.	2.7	6.2	4.8	3.9	3.7	3.8	5.5	8.6	14.4	14.7
SITC 76 Telecom / Sound	14.0	19.2	16.8	12.1	10.4	9.5	6.8	5.3	4.5	4.4
SITC 77 Electr. mach.	7.3	9.3	9.5	9.0	9.3	8.5	7.5	7.0	7.2	7.1
SITC 84 Apparel	13.2	10.8	8.4	5.3	4.6	3.7	2.6	2.0	1.6	1.5
SITC 85 Footwear	26.8	27.9	25.0	19.3	17.7	14.6	10.1	7.1	5.3	5.4
<i>2.3 HK → Japan</i>										
SITC 75 Office mach.	1.0	2.6	1.8	1.9	2.8	4.0	2.7	2.0	1.6	1.0
SITC 76 Telecom / Sound	1.2	2.3	2.0	2.4	1.3	0.6	0.7	0.7	1.0	0.9
SITC 77 Electr. mach.	0.7	1.1	1.3	1.0	1.0	1.0	1.4	1.5	2.2	1.9
SITC 84 Apparel	11.8	8.1	7.3	6.3	5.2	4.1	2.9	2.3	2.0	2.0
SITC 85 Footwear	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.2
<i>2.4 'Gr. China' → Japan</i>										
SITC 75 Office mach.	3.7	9.2	7.0	6.4	7.5	8.7	10.9	13.9	20.7	22.7
SITC 76 Telecom / Sound	16.4	23.9	23.4	19.7	17.6	19.4	19.1	18.7	20.0	20.8
SITC 77 Electr. mach.	8.2	11.1	12.1	12.1	13.4	13.6	14.0	14.4	16.5	17.9
SITC 84 Apparel	47.9	40.4	40.4	39.0	44.4	51.1	55.3	58.1	60.3	62.8
SITC 85 Footwear	35.7	33.6	33.2	31.8	37.0	42.6	46.4	50.8	52.8	55.9
<i>3.1 Mainland China → Germany*</i>										
SITC 75 Office mach.	0.0	0.1	0.2	0.3	0.5	0.8	1.6	2.6	3.4	3.6
SITC 76 Telecom / Sound	0.1	2.1	3.0	4.8	4.0	4.8	6.7	7.2	7.1	8.1
SITC 77 Electr. mach.	0.0	0.1	0.3	0.5	1.1	1.4	2.3	2.2	2.5	3.1
SITC 84 Apparel	2.8	4.5	5.0	6.9	9.5	8.5	9.6	10.1	8.8	9.7
SITC 85 Footwear	0.7	1.5	1.5	2.5	4.6	6.9	10.9	9.6	6.1	7.9
<i>3.2 Taiwan → Germany</i>										
SITC 75 Office mach.	1.4	4.4	4.3	5.5	6.8	7.9	8.4	7.7	9.0	10.3
SITC 76 Telecom / Sound	2.9	3.4	3.2	3.5	3.2	2.9	3.1	2.7	2.5	2.4
SITC 77 Electr. mach.	1.9	2.5	2.2	3.1	3.1	2.6	2.6	2.5	2.5	2.5
SITC 84 Apparel	2.6	2.4	2.0	1.4	1.6	1.3	1.0	0.9	0.7	0.7
SITC 85 Footwear	5.3	6.7	5.8	4.0	4.3	2.2	1.5	1.3	1.3	1.3
<i>3.3 HK → Germany</i>										
SITC 75 Office mach.	1.1	2.3	2.1	3.0	2.2	1.4	0.8	0.7	0.7	0.8
SITC 76 Telecom / Sound	1.8	2.0	1.6	2.0	1.8	1.4	0.9	0.6	0.5	0.6
SITC 77 Electr. mach.	1.3	1.5	1.4	1.1	1.2	1.0	0.9	0.9	0.8	0.9
SITC 84 Apparel	9.6	9.2	8.3	7.6	7.2	6.3	6.7	5.9	5.3	4.7
SITC 85 Footwear	0.4	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.1
<i>3.4 'Gr. China' → Germany*</i>										
SITC 75 Office mach.	2.4	6.8	6.6	8.8	9.5	10.1	10.9	11.1	13.1	14.6
SITC 76 Telecom / Sound	4.8	7.5	7.7	10.2	8.9	9.1	10.8	10.4	10.0	11.1
SITC 77 Electr. mach.	3.2	4.1	3.9	4.7	5.4	5.0	5.8	5.6	5.9	6.4
SITC 84 Apparel	15.0	16.1	15.3	15.9	18.3	16.0	17.3	16.9	14.8	15.1
SITC 85 Footwear	6.4	8.4	7.5	6.7	9.3	9.3	12.7	11.1	7.5	9.3

Source: Computation from OECD, *Foreign Trade by Commodities 1990*, Vol. 3-5, Paris 1991; OECD, ITCS Rev. 3, 1-5/1997.

*Starting 15.03.1994, EU restriction came in force for imports of many consumer goods from Mainland China, allowing only a 10 per cent growth of imports compared to the average of 1990-92 imports.

Table A9 Decomposition of nominal export growth, various East Asian economies 1983/84–93/94 (%)

	1983/84– 88/89 ann. avg.	from world demand	from market share	from export diversific.	1988/89– 93/94 ann. avg.	from world demand	from market share	from export diversific.
China	22.8	4.3	14.1	3.2	21.9	6.3	12.4	2.0
Indonesia	1.1	-4.7	1.0	5.0	12.1	4.3	0.3	7.1
Malaysia	10.2	0.8	5.4	3.7	17.0	8.7	1.9	5.6
Thailand	21.9	14.0	1.1	5.8	17.4	8.7	1.0	6.8

Source: WDI 1997, pp. 257–9.

Note: *Only commodity exports; diversification into service exports, which is particularly relevant for high-income economies like Japan, is not considered here. For the respective countries 'traditional imports' (i.e. 75% of basis year exports) as of 1983; China: basis 1984.

Table A10 Volume and distribution of Taiwanese investment in Mainland China by branches, Taiwanese data 1991–96 (%)

	1991–93	1994–96
Volume in mill. US\$	3,590	3,284
<i>Share of branches:</i>		
Electro/Electronics	14	20
Food processing	11	12
Plastic fabrics	12	6
Metal	8	10
Chemistry	6	9
Precision instruments	9	3
Textiles	6	6

Source: Computed from InvCom, *Statistics...* (Tongji Yuebao), Dec. 1996.

Table A11 Economic relevance of small enterprises in Taiwan 1985–95 (%)

Indicator	1985	1990	1995
Share of enterprises	99	97	96
Share of employment	68	...	79
Share of export value	65	57	53

Sources: Chaponnière and Lautier 1998, p. 248 (Data from 1985); IBRD 1993, p. 162 (Data from 1990); CA 1995, pp. 1108–9 (Data from 1995). A different source (IBRD 1994, p. 112), however, indicates that the share of local trading companies is much smaller because of a large share of Japanese General Trading Companies in Taiwan's foreign trade.

The most recent official Taiwanese definition of SME includes enterprises

– with a paid-in capital of less than NT\$40 mill.;

– or total assets less than NT\$120 mill.;

– or in the case of exporters/importers: annual sales revenues of less than NT\$40 mill. (Chaponnière and Lautier 1998, p. 248).

Table A12 Mainland China's exports by type of exporting enterprise 1994

Type of exporting enterprise	Number of enterprises	Export Share %
Regional-level FTCs	...	40
State-owned producing enterprises	...	17
National-level FTCs	...	12
State-owned enterprises	8,800	69
Joint ventures	16,000	19
Wholly foreign-owned enterprises	4,600	9
Collective enterprises	400	1
Others	500	1
Non-state owned enterprises	21,500	30

Source: DIW and ITC 1997, p. 59; von Kirchbach and Aguado 1996, p. 71. Although using the same source quite different data on number of firms: IBRD 1997, p. 13. The number for FTCs given in this source is 9,400.

Table A13 Mainland China's exports by type of producing enterprise 1994

Type of producing enterprise	Export Share %
Rural enterprises (TVE)	33
State-owned producing enterprises	39
Joint ventures	19
Wholly foreign-owned enterprises	9

Source: Computed with data from China Customs Statistics, as quoted in Taubmann 1995.

Notes

- 1 This argument is related to the debate on the causal relation between productivity growth and export performance. IBRD 1993, pp. 316–24 argues that exports helped East Asian economies to increase total factor productivity rather than vice versa: this was due not only to static factors such as economies of scale, but more by dynamic factors like improving knowledge and adopting international best-practice technologies. For an overview on this debate, and a contrasting opinion see Chowdhury and Islam 1993, pp. 79–87.
- 2 On the considerable data problems for Mainland China's foreign trade, see e.g. Lardy 1995.
- 3 These figures of 1980–95 were outstripped only by three other 'High Performing Asian Economies': the Republic of Korea (14 per cent), Thailand (16 per cent), and Vietnam (18 per cent), and met by some European 'newcomers' (or: newcomers to the new European economic core): Portugal (12 per cent), Ireland (13 per cent), and Turkey (13 per cent).
- 4 The same is applicable for commercial services, where Mainland China is now ranking 16th, and Taiwan 19th, but this segment of world trade is not dealt with in the present paper as assessing the dynamics of international trade in service still poses considerable data problems (see Grupp 1998, p. 205)
- 5 'Traditional' exports of a country are defined in this source as the 3-digit commodity groups that made up at least 75 per cent of the value of the country's exports in 1983/84 and included at least the 10 largest commodity groups (WDI 1997, p. 259).
- 6 The algebraic relation can be expressed as $X_1/X_0 = f_1 \cdot f_2 \cdot f_3$
 $f_1 = W_1/W_0$
 $f_2 = (\tau_1/\tau_0)/(W_1/W_0)$
 $f_3 = (\tau_0/X_0)/(\tau_1/X_1)$
 τ are the country's traditional exports, W are world imports in these commodity groups, X are the country's total exports, 0 and 1 designate the first and the last year of the period under consideration.
- 7 Whether interaction, interdependence or integration are the appropriate terms to describe what is happening between the two economies, may be disputed: e.g. see Crane 1993, Hong 1996, Bass 1998a.
- 8 As with figures on foreign trade, caution is also necessary with figures on foreign direct investment in China: first, there is the problem of re-routing indigenous capital via Hong Kong in order to get subsidies and other benefits for foreign investors; second, there are 'fake' joint ventures established to allow domestic enterprises to get hold of import (and export) licences.
- 9 For a comparable approach, using data from Mainland China and Japan, see Sekiguchi 1990.
- 10 More precisely, the size hypothesis in this formulation should be attributed to J.K. Galbraith (see Grupp 1998, p. 56).
- 11 The authors conclude: 'There is no unambiguous evidence of an important, generally valid, relationship between competition and innovative activity. Case studies provide thought-provoking possibilities. But where statistically significant relationships have been found, the explanatory power is small.' Baldwin and Scott 1987, p. 145.
- 12 According to a guess introduced into literature by Galli (1980, cited in Wade 1990, p. 147), 30 or even 50 per cent of Taiwan's foreign trade is said to be handled by Japanese *sōgō shōsha* in the late 1970s. This figure is also referred to by the World Bank (IBRD 1994), but is contradicted by more detailed data from Taiwanese sources (see Table A11).
- 13 However, compared to countries like Brazil this may not be considered a huge concentration (see von Kirchbach and Aguado 1996).
- 14 This is the general reason why in the 1980s and 1990s large enterprises divisionalized, used 'outsourcing', or even split-up into smaller semi-independent ones.

References

- 'Top Ten Trading Companies in China in 1995', <http://www.chinatoday.com/trade/a00.htm>
- Abramovitz, M. (1995) 'The origins of the postwar catch-up and convergence boom', in J. Fagerberg, B. Verspagen, N. van Tunzelmann (eds) *The Dynamics of Technology, Trade and Growth*, Aldershot: Edward Elgar, pp. 21–52.
- Baldwin, W.L. and Scott, J.T. (1987) *Market Structure and Technological Change*, Chur etc.: Harwood.
- Bass, H.H. and Wauschkuhn, M. (1995) 'Chinas Außenhandel', in H.H. Bass and M. Schüller (eds) *Weltwirtschaftsmacht China*, Hamburg: Institut für Asienkunde, pp. 76–99.
- Bass, H.H. (1996) 'Chinas Außenhandel mit den Industrieländern zwischen Exportförderung und Importprotektionismus', in H.H. Bass and K. Wohlmuth (eds) *China in der Weltwirtschaft*, Hamburg: Institut für Asienkunde, pp. 32–53.
- (1998a) *Wirtschaftskooperation zwischen Festlandchina und Taiwan – Potentiale und Grenzen*, Berichte des Arbeitsbereichs Chinaforschung im Institut für Weltwirtschaft und Internationales Management der Universität Bremen, Nr. 11: Universität Bremen.
- (1998b) *J.A. Schumpeter. Eine Einführung* (Gastvorlesungen an der Aichi-Universität, Toyohashi/Japan), Materialien des Universitätsschwerpunktes 'Internationale Wirtschaftsbeziehungen und Internationales Management', Bd. 12: Universität Bremen.
- Becker, J. (1997) *South China Morning Post*, 04.01.1997, cited from the German translation 'Shanghai traditionsreiche Textilindustrie produziert nur noch Arbeitslose', *der überblick*, 4/97, pp. 70–1.
- Brender, A. and International Monetary Fund (IMF) (1992) *China's Foreign Trade Behavior in the 1980s: An Empirical Analysis*, IMF-Working Paper WP/92/5.
- Carlsson, B. and Jacobsson, S. (1996) 'Technological systems and industrial dynamics: implications for firms and governments', in E. Helmstädter and M. Perlman (eds) *Behavioral Norms, Technological Progress, and Economic Dynamics. Studies in Schumpeterian Economics*, Ann Arbor: The University of Michigan Press, pp. 261–83.
- Chang Ha-Joon (1995) 'Explaining "Flexible Rigidities" in East Asia', in T. Killick (ed.) *The Flexible Economy. Causes and Consequences of the Adaptability of National Economies*, London and New York: Routledge, pp. 197–221.
- Chaponnière, J.R. and Lautier, M. (1998) 'Industrial policy for catching up. The case of Taiwan', in M. Storper, S.B. Thomadakis and L.J. Tsipouri *Latecomers in the Global Economy*, London and New York: Routledge, pp. 224–53.
- Chowdhury, A. and Islam, I. (1993) *The Newly Industrialising Economies of East Asia*, London and New York: Routledge.
- Crane, G. T. (1993) 'China and Taiwan: not yet "Greater China"', *International Affairs*, 69, No. 4, pp. 705–23.
- CSYB = *China Statistical Yearbook*, various years, Beijing.
- Deng Li and Wang Yan Zhong (1997) 'Gao hai zhong de xiao chuan – Zhongguo xiao qiye chukou ji fazhan fangxiang', *Guoji Maoyi*, 5, pp. 23–7.
- DIW/ITC (1997) = Deutsches Institut für Wirtschaftsforschung and International Trade Centre UNCTAD/WTO (1997) *China als Handelspartner und Produktionsstandort für deutsche mittelständische Unternehmen* (Bearbeitung: F. von Kirchbach, H. Trabold et al.), Berlin: DIW.
- Donnithorne, A. (1972) 'China's cellular economy: Some economic trends since the Cultural Revolution', *China Quarterly*, No. 52, pp. 605–19.
- Dosi, G., Pavitt, K. and Soete, L. (1990) *The Economics of Technical Change and International Trade*, New York: Harvester Wheatsheaf.

- Eliasson, G., Green, C. and McCann, C.R. Jr. (eds) (1998) *Microfoundations of Economic Growth. A Schumpeterian Perspective*, Ann Arbor: The University of Michigan Press.
- Fagerberg, J., Verspagen, B. and van Tunzelmann, N. (1995) 'The economics of convergence and divergence: an overview', in J. Fagerberg, B. Verspagen and N. van Tunzelmann (eds) *The Dynamics of Technology, Trade and Growth*, Aldershot: Edward Elgar, pp. 1–20.
- Fei, J.C., Ohkawa, K. and Ranis, G. (1985) 'Economic development in historical perspective: Japan, Korea, and Taiwan', in K. Ohkawa and G. Ranis *Japan and the Developing Countries: A Comparative Analysis*, pp. 35–64.
- Freeman, C. (1987) *Technology Policy and Economic Performance. Lessons from Japan*, London, New York: Pinter Publishers.
- (1995) 'Technological revolutions and catching-up: ICT and the NICs', in J. Fagerberg, B. Verspagen and N. van Tunzelmann (eds) *The Dynamics of Technology, Trade and Growth*, Aldershot: Edward Elgar, pp. 198–221.
- (1996) 'Catching-up and falling behind: the case of Asia and Latin America', in J. de la Mothe and G. Paquet (eds) *Evolutionary Economics and the New International Political Economy*, London: Pinter, pp. 160–79.
- Fukuyama, F. (1995) *Trust. The Social Virtues and the Creation of Prosperity*, New York: The Free Press; cited from the German translation: *Konfuzius und Marktwirtschaft. Der Konflikt der Kulturen*, München: Kindler.
- Gälli, A. and Franzen, J. (eds) (1995) *Die Familie des großen Drachen. Band I: Die VR China, Hong Kong, Macao und Taiwan auf dem Weg zu 'Großchina'?*, München etc.: Weltforum-Verlag.
- GATT (1991) = General Agreement on Tariffs and Trade *International Trade 89–90*, Geneva.
- Giersch, H. (1984) 'The Age of Schumpeter', in *American Economic Review*, Papers and Proceedings, 74, 2, pp. 103–9.
- Grupp, H. (1998) *Foundations of the Economics of Innovation. Theory, Measurement and Practice*, Aldershot: Edward Elgar Publishing.
- Herderschee, J. (1995) *Incentives for Exports, A case study of Taiwan and Thailand (1952–1987)*, Aldershot: Avebury.
- Herrmann-Pillath, C. (1994) *Wirtschaftsintegration durch Netzwerke: die Beziehungen zwischen Taiwan und der Volksrepublik China*, Baden-Baden: Nomos.
- (1996) Reflektionen über den Zusammenhang zwischen kultureller Modernisierung, Wirtschaftswachstum und Chinas Stellung in der Weltwirtschaft, hektogr. Beitrag zum Internationalen Symposium 'Ordnungsreform und Entwicklung der chinesischen Wirtschaft in den 90er Jahren', Giessen.
- Hobday, M. (1996) 'Innovation in East Asia: diversity and development', in M. Dodgson and R. Rothwell (eds) *The Handbook of Industrial Innovation*, Cheltenham and Brookfield: Edward Elgar, pp. 94–105.
- (1995) *Innovation in East Asia, The Challenge to Japan*, Cheltenham: Elgar.
- Hong Zhong (1996) 'Instrumente und Perspektiven der Integration des Großchinesischen Wirtschaftsraums', in H.H. Bass and K. Wohlmuth (eds) *China in der Weltwirtschaft*, Hamburg: Institut für Asienkunde, pp. 127–48.
- Hwang Sun-Gil (1998) *Das Wildgänsemotiv für Ost-Asien*, Arbeitspapiere zur sozialökonomischen Ost-Asien-Forschung, Bremen: Social Economic Action Research Institute, University of Bremen.
- IBRD-World Bank (1993) *The East Asian Miracle: Economic Growth and Public Policy*, New York and Oxford: Oxford University Press.
- (1994) *China. Foreign Trade Reform*, Washington, D.C.: The World Bank.
- (1997) *China 2020: China Engaged. Integration with the Global Economy*, Washington, D.C.: The World Bank.
- InvCom (1996) = Investment Commission Ministry of Economic Affairs, R.O.C. (1996) *Statistics . . . , Tongji Yuebao*, December.
- Jing Chai and Yang Dan (1995) 'A projection for China's foreign trade in the upcoming 6 years', in *China Economic News*, No. 5, pp. 6–8.
- Killick, T. (ed.) (1995) *The Flexible Economy. Causes and Consequences of the Adaptability of National Economies*, London and New York: Routledge.
- Klein, B.H. (1988) 'Luck, necessity, and dynamic flexibility', in H. Hanusch (ed.) *Evolutionary economics. Applications of Schumpeter's ideas*, Cambridge: Cambridge University Press, pp. 95–136.
- Krugman, P. (1983) 'New theories of trade among industrial countries', *American Economic Review. Papers and Proceedings*, Vol. 73, pp. 343–47.
- Lall, S. (1995) 'The creation of comparative advantage: Country experiences', in I. ul Haque et al. (eds) *Trade, Technology, and International Competitiveness*, Washington: The World Bank, pp. 135–54.
- Lardy, N.R. (1992) *Foreign Trade and Economic Reform in China (1978–1990)*, Cambridge: Cambridge University Press.
- (1995) 'The role of foreign trade and investment in China's economic transformation', *The China Quarterly*, pp. 1065–82.
- Laumas, P.S. (1962) 'Schumpeter's theory of economic development and underdeveloped countries', in J.C. Wood (ed.) (1991) *J.A. Schumpeter. Critical Assessments*, London and New York: Routledge, pp. 407–13.
- Long, S. (1994) 'Regionalism in Fujian', in D.S.G. Goodman and G. Segal *China Deconstructs*, London, pp. 202–23.
- Nelson, R.R. and Rosenberg, N. (1993) 'Technical innovation and national systems', in R.R. Nelson (ed.) *National Innovation Systems. A Comparative Analysis*, New York and Oxford: Oxford University Press, pp. 3–21.
- North, D.C. (1991) 'Institutions', *Journal of Economic Perspectives* 5 (1), pp. 97–112.
- OECD, *International Trade by Commodities ICTS, Rev. 3*, CD-Rom, various years.
- Ohmae Kenichi (1995) *The End of the Nation State. The Rise of Regional Economies*, New York etc.: The Free Press.
- Okuda Satoru (1994) 'Taiwan's trade and FDI policies and their effect on productivity growth', *The Developing Economies*, 32–4, pp. 423–43.
- Piore, M.J. and Sabel, C.F. (1984) *The Second Industrial Divide. Possibilities for Prosperity*, New York: Basic Books; cited from the German translation: *Das Ende der Massenproduktion*, Frankfurt: Fischer 1989.
- Porter, M. (1996) *Far Eastern Economic Review*, cited from *AP-Newsletter* 5/09.04.96.
- Ramamurthy, B. (1998) 'The Asian Experience I: China and Taiwan', in Ronnäs, Ö. Sjöberg and M. Hemlin *Institutional Adjustment for Economic Growth. Small scale industries and economic transition in Asia and Africa*, Aldershot: Ashgate, pp. 37–80.
- Redding, S. G. (1990) *The Spirit of Chinese Capitalism*, Berlin and New York: de Gruyter (2nd printing 1993).
- Rothwell, R. and Dodgson, M. (1996) 'Innovation and size of firm', in M. Dodgson and R. Rothwell (eds) *The Handbook of Industrial Innovation*, Cheltenham and Brookfield: Edward Elgar, pp. 310–24.
- Schumpeter, J.A. (1912) *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle*, cited from the 8th printing (1968), Cambridge, Mass.: Harvard University Press.

- (1947) *Capitalism, socialism, and democracy*, cited from the 2nd American edition, New York: Harper & Brothers.
- (1951) *Essays on Economic Topics* (ed. by R.V. Clemence), Port Washington N.Y.: Kennikat Press.
- Sekiguchi Suelo (1990) 'Foreign trade in Chinese economy: prices and price responsiveness', *The Developing Economies*, Vol. 28–4, pp. 390–417.
- Taubmann, W. (1996) 'Außenwirtschaftliche Aktivitäten ländlicher Industrieunternehmen in der VR China', in H.H. Bass and K. Wohlmuth (eds) *China in der Weltwirtschaft*, Hamburg 1996: Institut für Asienkunde, pp. 54–65.
- TSDB = *Taiwan Statistical Data Book* (1996), compiled by Council for Economic Planning and Development, Taipei.
- von Hayek, F. A. (1967) 'The economy, science, and politics', in: *Studies in Philosophy, Politics and Economics*, London: Routledge and Kegan Paul, pp. 251–69.
- von Kirchbach, F. and Aguado, J. (1996) 'China's foreign trade expansion: The changing face of Chinese exporters and importers', in H.-C. Bettignies (ed.) *Business transformation in China*, London etc.: International Thomson Business Press, pp. 61–84.
- Wade, R. (1990) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*, Princeton: Princeton University Press.
- Wakelin, K. (1997) *Trade and Innovation. Theory and Evidence*, Aldershot: Edward Elgar Publishing.
- Weber, M. (1972) *Wirtschaft und Gesellschaft. Grundriss der verstehenden Soziologie*, 5. rev. ed., Tübingen: J.C.B. Mohr (Paul Siebeck).
- WDI (1997) = World Development Indicators, Washington, D.C.
- Welfens, P.J.J. (1989) 'Schumpetersche Prozesse in der Weltwirtschaft', *List Forum für Wirtschafts- und Finanzpolitik*, Vol. 15, H. 1, pp. 40–60.
- WTO (1998) = World Trade Organization, World Trade Growth Accelerated in 1997, Despite Turmoil in Some Asian Financial Markets (19.03.1998) <http://www.wto.org/wto/intltrad/internat.htm>
- Yabuki Susumu (1995) *Zusetsu Chuugoku no keizai*, cited from the English translation *China's New Political Economy. The Giant Awakes*, Boulder etc.: Westview Press.
- Yamamoto Yasuko (comp.) (1997) *Trade structure of Hong Kong, Taiwan and China, and Hong Kong re-export trade statistics*, Tokyo: Institute of Developing Economies.
- Yeats, A. (n.d.[1991]) *China's Foreign Trade and Comparative Advantage: Prospects, Problems, and Policy Implications*, World Bank Discussion Papers No. 141, Washington, D.C.: The World Bank.
- YITS = United Nations, *Yearbook of International Trade Statistics*, various years, New York.

7 Industrialization and institutional change in Hong Kong 1842–1960¹

David W. Clayton

This chapter will assess how institutions aided the operation of markets in Hong Kong and why they emerged, by outlining how chambers of commerce and the state provided market information and regulated transactions. It will also assess whether Hong Kong fits the model of institutional change developed by Douglass North.

Institutions and economic development

North and others argue that if an economy has good institutions it will develop and if it has bad institutions it will stagnate (Davis and North 1971; North and Thomas 1973; North 1990 and 1991).² These institutions can be divided into informal ones, such as customary practices and codes of conduct, and formal ones, such as chambers of commerce, guilds and the state, which provide market information and regulate transactions by using bureaucracies and legal systems. North believes that as an economy develops, informal institutions will give way to formal ones, as part of a two-stage process. First merchant associations, by codifying and extending traditional rules governing trade, establish private property rights. Initially such institutions greatly improve the flow of information and reduce the need for expensive contractual agreements between members. But eventually, because they constrain market integration by encouraging intra-association trade, private property rights become an obstacle preventing further economic development.³ Consequently, a second stage is required when the state codifies private (often regional) property rights into a set of public national property rights. North holds that this later development, which greatly expands the potential size of the market, is aided by the coexistence of a state large and powerful enough to protect merchants' interests and mercantile élites sufficiently strong enough to protect their own interests *vis-à-vis* the state.⁴ Once established, these economy-wide institutions significantly reduce the 'transaction' and 'information' costs of doing business.

Alternative agents for meeting and reducing these costs are the firm and the market (Casson 1997; Williamson 1975 and 1985). The firm internalizes these costs by creating bureaucracies and hierarchies to process information. Thereafter these structures reduce costs by reaping economies of scale or by applying new technologies, such as accounting practices or computers. By comparison, the market